SECTION 01 35 14
OPERATING SYSTEM INTERFACE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Site specific work plan.

B. BART operating rules and procedures.

1.02 MEASUREMENT AND PAYMENT

A. Separate measurement or payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Bid Schedule of the Bid Form, or incidental to the Work.

1.03 DEFINITIONS

A. Safety Monitor: A Qualified Person (see Operating Rules and Procedure Manual) assigned to oversee the operational safety of Contractor or other outside agency work activity. Safety Monitors shall have successfully completed Safety Monitor training and field certification.

B. BART Operating System: Facilities, equipment and installations that are essential for normal revenue operation, including the BART trackway and equipment therein, traction power facilities, train control rooms, communications equipment, ventilation equipment, and other equipment and elements of infrastructure essential for normal revenue operation.

C. BART Operating Envelope: That portion of the BART system within protective fencing, tunnels, tubes, subways, stations and aerial structures wherein trains operate. Operating Envelope shall be understood to include all areas with BART transit vehicle movement, including shops and yards.

D. BART Minimum Clearance Envelope: The dynamic envelope within which BART trains operate.

E. Revenue Hours: Hours during which passenger carrying trains operate as defined by the current schedule and which may be modified by the BART Operations Control Center (OCC).

F. Window: District-approved time period during which active tracks are removed from service for construction purposes.

G. Site Specific Work Plan (SSWP): A program, plan, and schedule prepared and submitted by the Contractor and approved by the Engineer, which accurately describes and illustrates the manner in which work that may affect the Operating System shall be accomplished within the District-approved windows.

H. Track Zone: An area within 72 inches (6 feet) of the outside rail on both sides of the track.

1.04 ACCESS INTO THE BART OPERATING SYSTEM

A. Access to the BART Operating System shall be in accordance with BART publication, "Standard Procedures for Access to the BART Operating System" (Management Procedure – 31).

1.05 SITE SPECIFIC WORK PLAN (SSWP)

A. Obtain Engineer's approval of a SSWP prior to starting work that may affect the Operating System. Such work shall be performed under a SSWP which may require a District Approved Physical Barrier between the Contractor's operations and the Operating System.

B. The Contractor shall furnish all labor, materials, and equipment as required to perform and complete the work in the limited time available. The Contractor shall maintain the approved schedule in the SSWP.

C. SSWPs that may impact normal functioning of any part of the Operating System shall include a detailed schedule for each activity in the SSWP. The schedule shall show the expected work progress for each activity on an hourly basis. The schedule shall include a time at which all activities planned under the SSWP will be completed. Failure of the Contractor to complete the scheduled activities by the planned time or to put in place an approved contingency plan so that the system is available for operations at the approved completion time shall make the Contractor liable for liquidated damages as specified in Contract Specifications Section 01 11 00, Summary of Work, for each hour or part of an hour that the operation of the system for passenger revenue service is delayed. These liquidated damages are distinct and separate from liquidated damages specified for failure to complete the contract on time in Contract Specifications Section 01 11 00, Summary of Work.

D. The SSWP shall contain a description of any difference to the Operating System between start and finish of the work. The SSWP shall show each activity and where and how it affects normal operation of the system. Each activity in the SSWP shall include all labor, materials, and equipment required to complete the activity within the District-approved time period (window). The SSWP shall include an assessment of any BART personnel (Safety Monitor, Electrician, Impairment Coordinator, Inspector, Technician and etc.) necessary to complete the work.

E. The SSWP shall include contingency plans for putting the system back in operation in case of an emergency and in case the Contractor fails to perform and complete the work in accordance with the approved schedule. Contingency plans shall address the various stages of construction.

F. The SSWP shall be submitted to the Engineer at least six weeks prior to the proposed start of work covered by the SSWP. The Engineer may request explanations and changes to the SSWP to conform the SSWP to the Contract requirements. If the SSWP is not acceptable to the Engineer, the Contractor shall revise the SSWP to make it acceptable.

G. Not less than one week prior to the scheduled start of work, the Contractor will be informed if the submitted SSWP is acceptable. Once the SSWP is approved, the Contractor shall assemble the resources necessary to perform the work represented by the SSWP. The necessary resources shall be available and demonstrated ready for use on the Friday of the work week. At that time, the Engineer will make a final decision as to whether or not the work is to proceed as planned or be canceled. The prime consideration will be the state of

readiness of the Contractor. However, BART operation and maintenance plans may also affect the decision.

H. If the Contractor is delayed by the District from performing the work and the Contractor has the necessary resources available and ready to perform the Work, the delay to the Contractor will be compensated as specified in Article GC8.4.3.

I. References specified herein to weeks mean the week starting with 0001 hours Saturday and the next six days of the proposed work schedule.

J. The following types of work are examples of work activities requiring a SSWP and a Window:

1. Establishment of defined construction areas within the BART Operating Envelope including installation of construction fence and deactivation/cutover and maintenance of BART Operating System. See Attachments 1-4.

2. Resumption of BART operations within defined construction areas following completion of construction including reactivation/cutover and testing BART Operating Systems and removal of construction fence.

3. Movement of construction equipment, materials and personnel within the BART Operating Envelope. See Attachments 1-4.

4. Where Contractor's crane booms or jibs, concrete pump booms and other similar equipment will swing out over active tracks during normal work operations, a SSWP will be required. In developing this SSWP, the Contractor shall pay particular attention to describing the safeguards to be employed, e.g., how loads will be prevented from entering the operating envelope, how crane hooks, lifting gear and the like will be kept away from BART equipment and installations. Where crane loads will enter the operating envelope, a Work Window will be required.

    a. Where the Contractor's equipment could, through overturning or falling, accidentally enter into the operating envelope, the Contractor shall pay particular attention to ensure the stability of the equipment.

    b. When construction is conducted above operating tracks, a plan for such operations shall be submitted by the Contractor and approved by the Engineer that demonstrates how the operating tracks will be protected from falling objects or debris, from water or other liquids that might otherwise drop onto tracks or BART vehicles.

5. Work on electrical or computer systems that could affect the BART Operating System.

6. Cranes, booms, jibs, or similar equipment within 10 feet of the side of any aerial or at-grade track structures.

1.06 BART OPERATING RULES AND PROCEDURES

A. Employees of the Contractor scheduled or expected to perform work within the Operating Envelope are required to have successfully completed, within the previous 12 months, BART's prescribed training program for performing work under BART's Operating Rules and Procedures. The program is four hours in length. The Contractor shall keep records of those successfully completing the course.

B. The District will provide training, and retraining every 12 months, for up to four supervisory-level personnel, one of whom shall be appointed the Contractor's Safety Representative for this Contract. The Contractor shall have at least two supervisors on the project at all times, one of whom shall be the Contractor's Safety Representative for this Contract. Both supervisors shall have successfully completed the District-provided training course within the previous 12 months. The course is 16 hours long, and the trainees must pass the required exams to successfully complete the course. The Contractor shall provide the same District-approved training for all other personnel expected to perform work within the operating envelope.

C. A copy of the current BART Operating Rules and Procedures Manual (OR&P) will be made available to the Contractor. A copy of the OR&P shall be kept available at the jobsite. The Engineer will periodically check the availability of the jobsite OR&P manual. All activities within BART's operating envelope shall comply with the OR&P. Violations of the OR&P or failure to produce the jobsite OR&P manual will subject the Contractor to prompt exclusion from the jobsite until the Contractor demonstrates knowledge of proper compliance procedures to the satisfaction of the District. Such exclusion from the jobsite will not be grounds for any additional compensation nor for any extension of the Contract completion time.

1.07 SYSTEM REACTIVATION SAFETY INSPECTION CHECKLIST

A. In accordance with the District's policy, a System Reactivation Safety Inspection Checklist shall be developed prior to the return of any safety critical systems to service. The Contractor shall support the District and its representatives in preparing and implementing the Cutover Checklist to ensure the elimination or mitigation of identified potential hazards. A System Reactivation Safety Inspection Checklist is provided as part of the SSWP template.

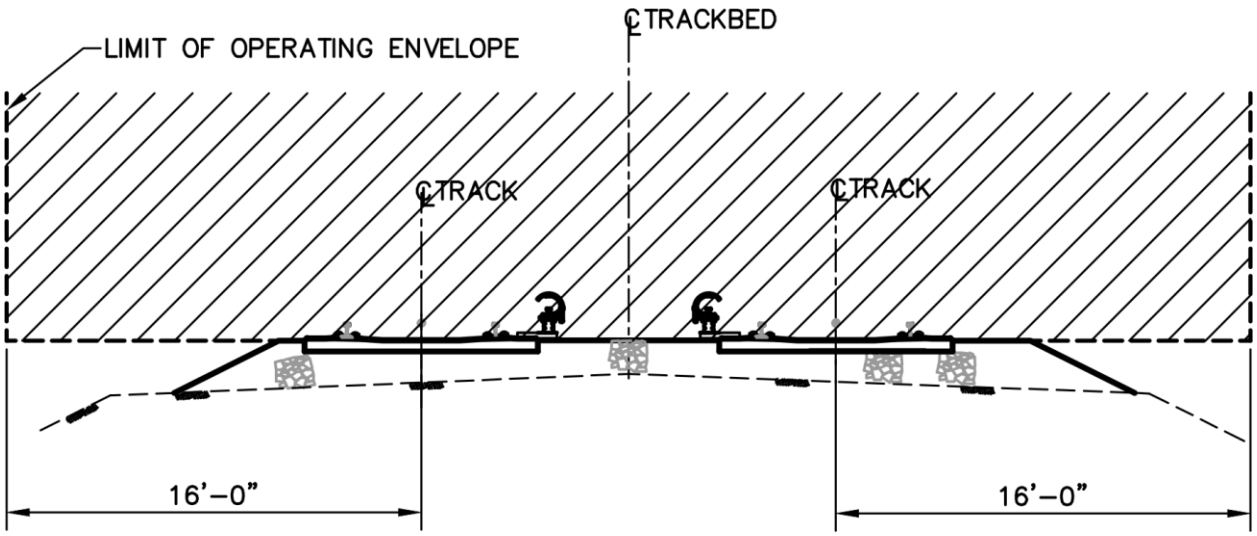
PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

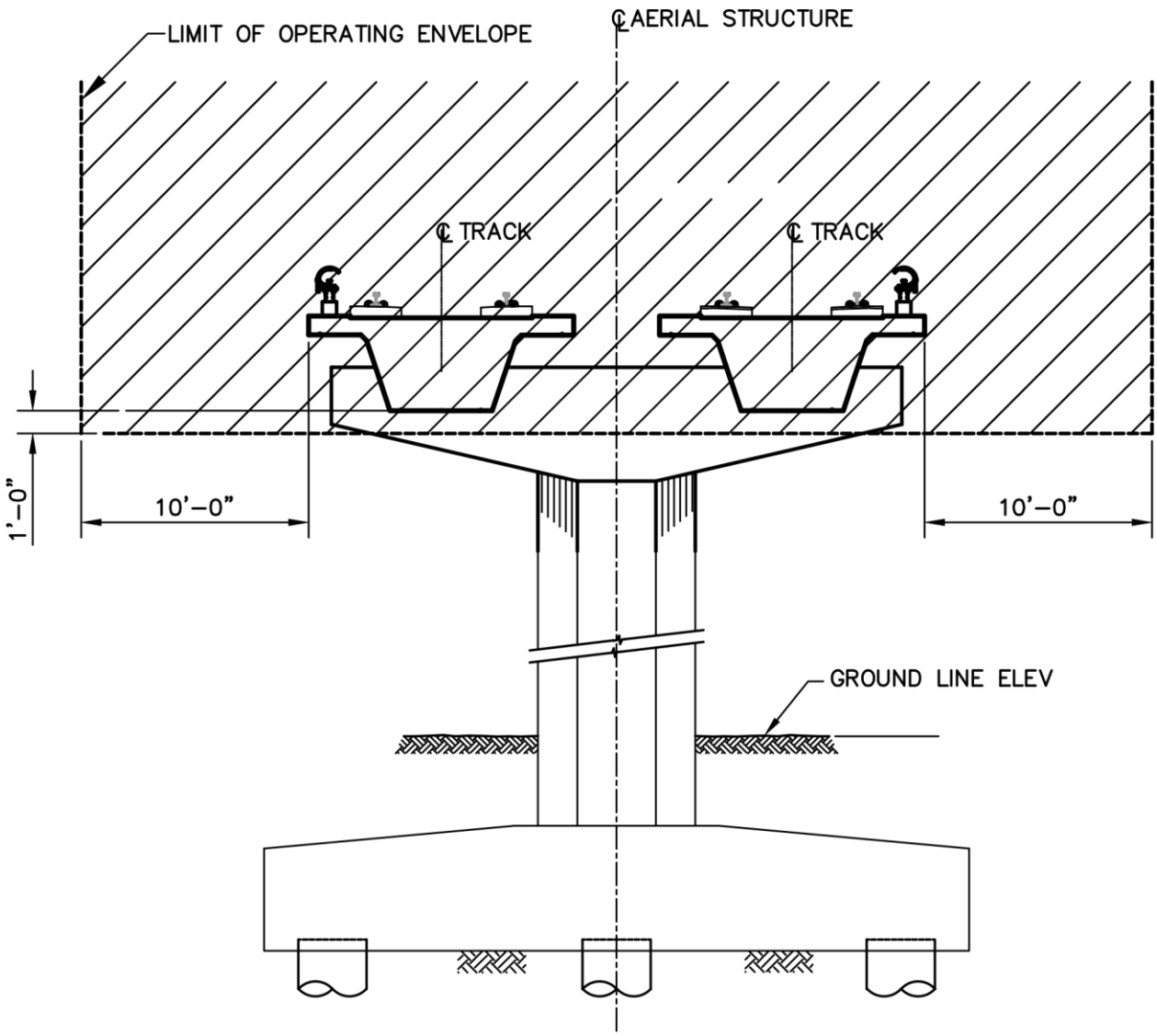
Not Used

PART 4 ATTACHMENTS



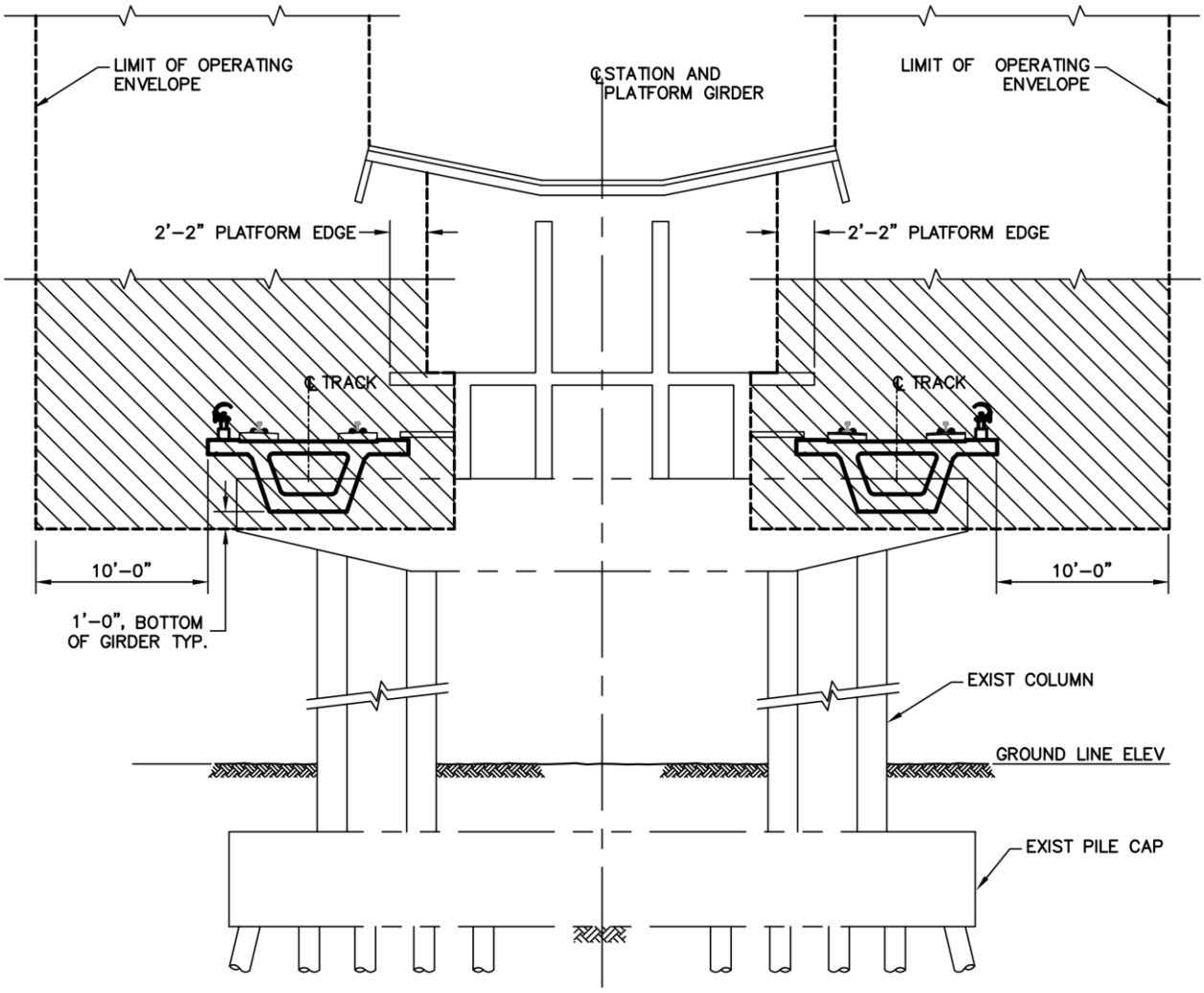
Attachment 1: Operating Envelope - Grade Track

Source: IL013361



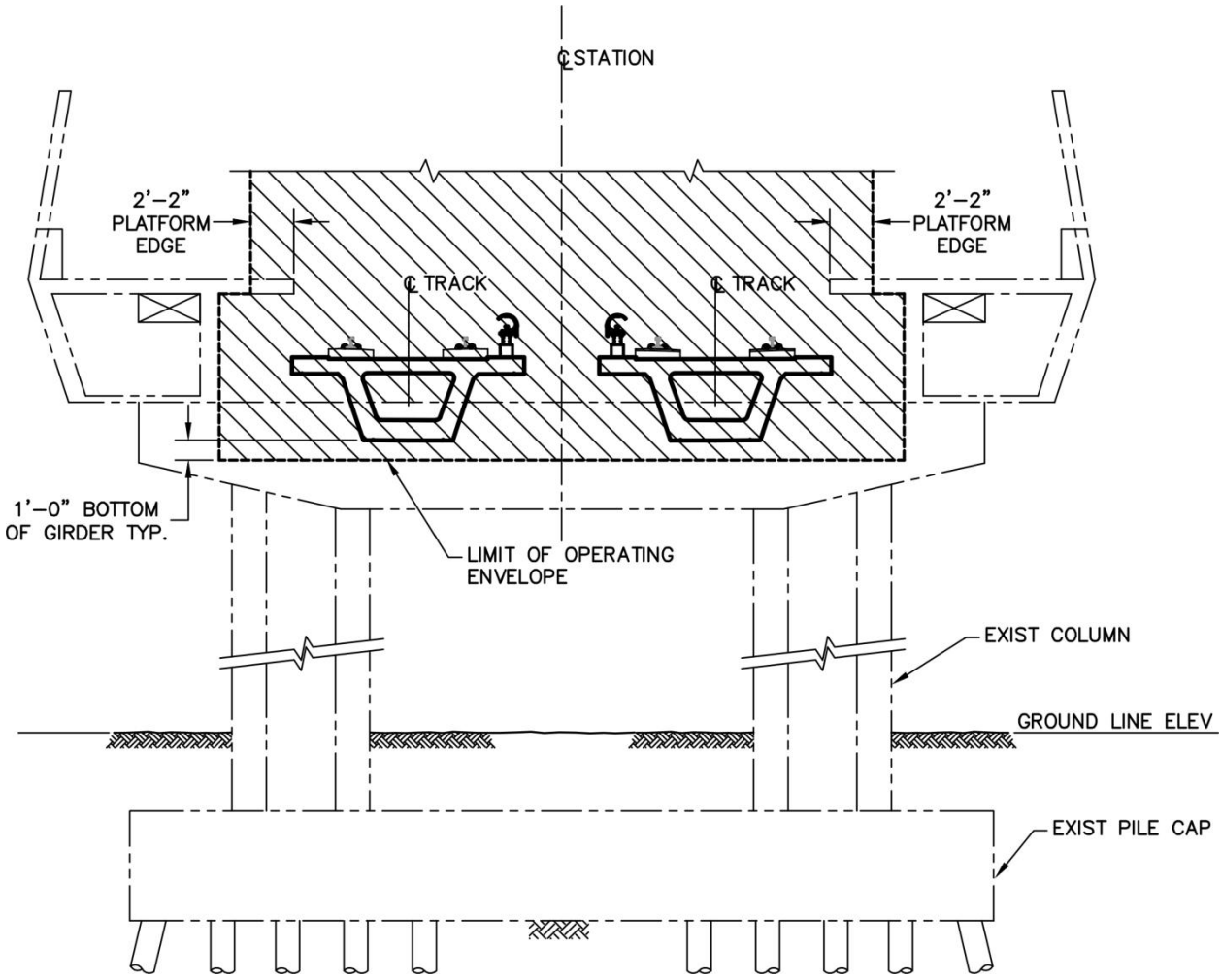
Attachment 2: Operating Envelope - Aerial Track

Source: IL013362



Attachment 3: BART Station Operating Envelope - Outside Track

Source: IL013363



Attachment 4: BART Station Operating Envelope - Inside Track

Source: IL013364

END OF SECTION 01 35 14